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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/923,484

08/06/2001

Mitchell Rose

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02/27/2003

Mitchell Rose  
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EXAMINER

SCHEUERMANN, DAVID W

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/923,484

Applicant(s)

ROSE, MITCHELL

Examiner

David W. Scheuermann

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14, 17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 5, 15-16 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "non-magnetically-permeable" in claim 17 is used by the claim to mean "non-magnetic," while the accepted measure of permeability is "The measure of how much better a given material is than air as a path for magnetic lines of force," according to Rudolf F. Graf in his book Modern Dictionary of Electronics, 6<sup>th</sup> edition, 1992, ISBN: 0-672-22041-5. Although some materials may have a lower magnetic permeability than others, zinc neither has a permeability value of zero nor is "non-magnetically-permeable." For example, the permeability of free space  $\mu_0$  is equal to  $4\pi 10^{-7}$  H/m. The examiner suggests replacing "non-magnetically-permeable" with --non-magnetic--.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 6, 7, 8, 10, 11, 12, 19 and 20 rejected under 35 U.S.C. 102(d) as being anticipated by Smith, R. A., US 3535566. Smith shows toroidal core 37 upon

which winding coils 31 are disposed. Further note that magnets 22 and 23 form a cross-sectional c-shape, which surrounds the core on four sides.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith. Smith discloses the invention substantially as claimed as described supra. However Smith does not expressly disclose either a single layer of turns of wire for the coils or a magnet consisting of one piece. It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrive at an optimum number of layers of turns of wire and the number of magnets comprising the rotor of Smith through routine experimentation. The courts have established via, *in re Aller*, 105 USPQ 238 (CCPA 1955) that, "...even though applicant's modification results in great improvement and utility over prior art, it may still not be patentable if modification was within capabilities of one skilled in art; more particularly, where general conditions of claim are disclosed in prior art, it is not inventive to discover optimum or workable ranges by routine experimentation.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 1 above, and further in view of Schwarzler, US 4408139. Smith does not expressly disclose passages into the core. Schwarzler teaches making passage 31

into core 1 for the purpose of providing a cooling conduit. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to provide cooling ducts to the core 37 of Smith. One of ordinary skill in the art would have been motivated to do this to channel cooling fluid to the core.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 1 above, and further in view of Sawada et al., US 6133667. Smith does not expressly disclose use of rectangular wire. In the similar art of motors, Sawada et al. disclose use of rectangular wire as shown in figure 4, for the purpose of improving the accuracy of the winding position as described in the abstract. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use rectangular wire to form the coils of Smith. One of ordinary skill in the art would have been motivated to do this for any of improving winding position accuracy, reducing eddy currents, and forming a more compact structure.

#### ***Allowable Subject Matter***

Claims 5, 15, 16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukada shows a rotor carrying a plurality of permanent magnets. Izawa et al. in figure 6(A) show a three-sided magnet overlapping a core. Ewing et al. in

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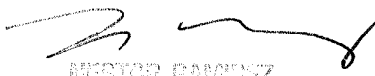
figure 2 show rotor frame 23 with magnets 19, 21 and 22 on three sides of core coil 17. Allwind in figure 7 shows three magnetic rotors 506 with cores 503 located in between. Busch shows c-shaped magnet 18. Stcherbatcheff shows three magnetic rotors with interspaced cores. Janzen in figure 9 shows magnetic rotor L around core Sp on three sides.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (703) 308-9637. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dws  
February 21, 2003

  
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SUPERVISOR, EXAMINER  
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